

## **REMARKS**

Applicant respectfully requests reconsideration and continued examination of this application, particularly in view of the following remarks. Claims 1-42 are pending in this application. New claims 41 and 42 have been added, similar in scope to claims 29 and 16, respectively, except that the bottle opening limitation of claims 29 and 16 has been omitted.

### **I. Prior Art Rejections.**

Claims 1-2, 5-8, 10-17, 20-22, 24-28 were rejected under 35 U.S.C. § 103(a) as being obvious over U.S. Patent No. 6,326,032 to Richter et al. (Richter) in view of U.S. Patent No. 5,368,828 to Carlson (Carlson) and further in view of U.S. Patent No. 4,635,662 to Totten (Totten). Claims 3-4, 9, 18-19, and 23 were rejected under 35 U.S.C. § 103(a) as being obvious over Richter in view of Carlson, and further in view of Totten and U.S. Patent No. 4,566,251 to Spisak (Spisak). Claims 29-40 were rejected under 35 U.S.C. § 103(a) as being obvious over Richter in view of Carlson and in further view of Spisak. Applicant respectfully traverses the rejections for the reasons set forth below.

### **II. Claims 1-42 Are Unobvious Over the Cited Prior Art.**

#### **A. None of the References, Either Alone or in Combination, Make the Claimed Invention Obvious.**

None of the above references teach, suggest, or disclose the claimed invention of claims 1-42, alone or in combination. Even if one skilled in the art were motivated to combine the above references, one would still not arrive at the claimed invention. The combination of references cited by the Examiner do not teach or suggest sterilizing a bottle by introducing an atomized sterilant into an inverted bottle, particularly where the bottle has an opening that prevents atomized particles from impinging directly on a portion of the bottle interior surface as recited in claims 1-40. The invention allows for a reduction in the amount of sterilant needed to sterilize a bottle and helps prevent the introduction of any foreign matter into the bottle as it can be inverted during the sterilization and rinsing process. The invention is a significant advance over the prior art, where a bottle is inverted only for rinsing.

In support of the rejection of claims 1-2, 5-8, 10-17, 20-22, 24-28, the Examiner asserts that one skilled in the art could modify the system and apparatus of Richter with the disclosures of Carlson and Totten to arrive at the Applicant's invention as claimed. Applicant respectfully disagrees with the Examiner. Only when one is armed with knowledge of Applicant's invention can one modify the teachings of those references in a way not suggested by them to arrive at the present invention in a hindsighted, modified reconstruction of those references – not from any teaching or suggestion in the references themselves.

Richter discloses a method of sanitizing bottles with a sanitizing solution. Richter, however, does not disclose, teach, or suggest:

- (i) introducing an atomized sterilant into an inverted bottle;
- (ii) from a location exterior to an opening of the bottle;
- (iii) which bottle opening prevents atomized particles from impinging directly on a portion of the bottle interior surface;
- (iv) such that a thin film of the sterilant may form on a surface of the bottle.

Richter makes no disclosure or suggestion whatsoever of the above elements (i-iv) each of which is required in Applicant's invention as claimed. In fact, Richter actually teaches away from each of the foregoing elements of Applicant's invention by disclosing that the sanitizing agent floods the bottle interior instead of applying a thin film of sterilant.

The Examiner asserts that Totten and Carlson supply the elements which are deficient in Richter. Applicant respectfully disagrees with the Examiner.

Totten only discloses a bottle rinsing device. Consequently, Totten is not at all concerned with a system and method of sterilizing bottles in which atomized sterilant is injected into an inverted bottle as claimed. Totten is merely concerned with inverted rinsing, not inverted sterilization. Totten is the only reference which discloses introducing a fluid into an inverted bottle from an exterior of the bottle (all other references only disclose inverting a bottle to drain the fluid). See, Totten at col. 2, lines 34-39. However, Totten merely discloses a rinsing device that works by flooding or introducing a full stream of water (i.e., rinsing) into the inverted bottle. Totten certainly does not teach or suggest introducing an atomized sterilant or any

form of sterilant for that matter, into an inverted bottle, wherein the atomized sterilant is introduced from an inverted position exterior to the bottle, and even more particularly, with respect to claims 1-40, where the bottle has an opening that prevents atomized particles from impinging directly on a portion of a bottle surface.

Furthermore, Carlson also does not supply the elements that are deficient in Richter and/or Totten. Carlson merely discloses introducing an atomized sterilant into the top of an upright carton, the carton having an opening as wide as its body from the top of the carton. Even if Carlson is used by the Examiner only for its disclosure of an atomized stream as asserted by the Examiner on pages 7-8 of the August 12, 2003 Office Action, there is still no teaching, suggestion, or disclosure in Carlson whatsoever which would suggest introducing an atomized sterilant into an inverted bottle, and more particularly, where the bottle has an opening that prevents atomized particles from impinging directly (i.e., a line of sight impingement) on a portion of a bottle surface.

In addition, there is no suggestion to make the combination of Richter, Carlson, and Totten. Even if one skilled in the art combined the above references, one would not arrive at Applicant's claimed system and method inventions because the references do not teach, disclose or suggest alone or in combination introducing an atomized sterilant into an inverted bottle from a location exterior to the bottle, including where the bottle has an opening that prevents atomized particles from impinging directly on a portion of a bottle surface, to form a thin film on the surface. Thus, the Examiner's rejection of claims 1-2, 5-8, 10-17, 20-22, 24-28 should be withdrawn and claims 1-40 are in condition for allowance.

Additionally, the Examiner rejected claims 29-40 under 35 U.S.C. § 103(a) as being obvious over Richter in view of Carlson and in further view of Spisak. The Examiner adds Spisak to the combination of Richter and Carlson discussed above and asserts that Spisak teaches inverting bottles to drain the sterilant such that the exterior nozzle is disposed under and exterior to the opening of a bottle and thus one having ordinary skill in the art would have inverted the bottles to insure the condensate has been drained. Spisak, however, merely shows inverting a bottle after an atomized sterilant has been introduced. Applicant claims introduction of an atomized sterilant into an inverted bottle. Furthermore, Spisak, Carlson, or Richter

alone or in combination do not teach, suggest, or disclose in combination introducing the atomized sterilant into an inverted bottle, and particularly where the bottle has an opening that prevents atomized particles from impinging directly on a portion of the bottle interior surface to leave a thin film thereon. Thus, even if one skilled in the art were to combine the above references, one would not arrive at the Applicant's invention as claimed.

Indeed, the prior art teachings of injecting sterilant when the bottle is upright and inverting only to rinse teaches away from the claimed invention of injecting sterilant when the bottle is inverted, i.e., upside-down. The Examiner's rejection of claims 1-40 should be withdrawn and claims 1-42 are in condition for allowance.

**B. There is no Motivation to Combine the References  
as Set Forth by the Examiner.**

Furthermore, with respect to the Examiner's rejections under 35 U.S.C. § 103(a), there is no teaching or suggestion in any of the cited references, namely, Richter, Carlson, Spisak, and Totten, which suggests combination of those references to one skilled in the art in the manner the Examiner asserts. The Examiner asserts that one skilled in the art would be motivated to modify Richter's method and apparatus to include a bottle inversion step in order to flush the entire bottle of any foreign matter which inadvertently previously found its way into the bottle. However, this is not at all Applicant's reason for inverting the bottle as disclosed in Applicant's invention as claimed and misses the point of Applicant's invention.

As shown in any of the drawings of the present application, the reason for inverting the bottle in Applicant's invention is to aid in reducing the amount of sterilant needed to coat a surface of a bottle with sterilant. In particular, the present invention permits a reduction in the amount of sterilant required by inverting the bottle, introducing the sterilant in an atomized form, and, more particularly for claims 1-40, introducing the atomized sterilant in such a way that prevents particles of the atomized sterilant from impinging directly on a surface of the bottle. The invention can thus significantly reduce the amount of sterilant needed and can save manufacturers a substantial amount of resources. None of the references even remotely teach, suggest, or disclose, whether alone or in combination, a sterilization

apparatus, process, and system as claimed that introduces an atomized sterilant into an inverted bottle from a location exterior to the bottle, and further, as to claims 1-40, wherein the bottle has an opening that prevents atomized particles from impinging directly on a portion of a bottle surface, to form a thin film on the surface. Gravity inherently allows the upper interior portion of the inverted bottle, which because of the bottle's shape may be prevented from permitting direct particle spray impingement, to be contacted with the sterilant which may be present as a thin film while maintaining the advantage of using a minimal amount of sterilant. For example, see FIGS. 3-6 of the present specification.

In view of the foregoing, the rejection of claims 1, 16, and 29 should be withdrawn for the additional reason that there is no motivation disclosed within any one of the cited references for one skilled in the art to combine the references. Since claims 2-15 include the limitations of claim 1, claims 17-28 include the limitations of claim 16, and claims 30-40 include the limitations of claim 29, claims 1-42 are all in condition for allowance, including for the other reasons previously discussed.

#### **CONCLUSION**

In conclusion, pending claims 1-42 are allowable and an early indication of allowance is solicited.

Respectfully submitted,



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